

Listing of Claims

1. (Currently Amended) A method for identifying a compound that modulates T lymphocyte activation, the method comprising ~~the steps of:~~:

(i)-contacting the compound with ~~a~~an isolated recombinant TRAC1 polypeptide, wherein the polypeptide comprises ~~a~~TRAC1 polypeptide with an amino acid sequence having at least about 90% identity to the amino acid sequence of SEQ ID NO: 1, wherein the TRAC1 polypeptide has ubiquitin ligase activity; and

(ii)-determining the ~~functional~~ effect of the compound upon the TRAC1 polypeptide ~~ubiquitin ligase~~ activity.

2-5. (Canceled)

6. (Currently Amended) The method of claim 1, further comprising:

~~expressing a recombinant polypeptide wherein the polypeptide is expressed in a host cell, wherein the polypeptide comprises a TRAC1 polypeptide with an amino acid sequence having at least about 90% identity to the amino acid sequence of SEQ ID NO: 1, and wherein the TRAC1 polypeptide has ubiquitin ligase activity; and~~

~~indirectly determining the effect of the compound upon the TRAC1 ubiquitin ligase activity by measuring in the host cell one or more of CD69 expression, intracellular Ca²⁺ mobilization, Ca²⁺ influx, ligase activity, or lymphocytic proliferation.~~

7- 8. (Canceled)

9. (Currently Amended) The method of claim 6, wherein the host cell is primary ~~a~~ T lymphocyte.

10. (Original) The method of claim 6, wherein the host cell is a cultured T cell.

11. (Original) The method of claim 10, wherein the host cell is a Jurkat cell.

12. (Canceled)

13. (Original) The method of claim 1, wherein modulation is inhibition of T lymphocyte activation.

14. (Canceled)

15. (Currently Amended) The method of claim 1, wherein the TRAC1 polypeptide ~~comprises an~~
~~has the~~ amino acid sequence of SEQ ID NO:1.

16. (Currently Amended) The method of claim [[1]]~~15~~, wherein the TRAC1 polypeptide is encoded by a nucleic acid comprising [[a]] ~~the~~ nucleotide sequence of SEQ ID NO:2.

17. (Withdrawn) The method of claim 1, wherein the compound is an antibody.

18. (Withdrawn) The method of claim 1, wherein the compound is an antisense molecule.

19. (Original) The method of claim 1, wherein the compound is a small organic molecule.

20. (Withdrawn) The method of claim 1, wherein the compound is a peptide

21. (Withdrawn) The method of claim 20, wherein the peptide is circular.

22. (Currently Amended) The method of claim 1, further comprising the steps of:

(i) contacting the compound with a T cell comprising a recombinant ~~TRAC1~~ polypeptide, wherein the polypeptide comprises ~~a~~ ~~TRAC1 polypeptide with~~ an amino acid sequence having at least about 90% identity to the amino acid sequence of SEQ ID NO:1, wherein the TRAC1 polypeptide has ubiquitin ligase activity; and

(ii) determining the functional effect of the compound upon TRAC1 polypeptide ubiquitin ligase activity.

23. (Withdrawn and Currently Amended) ~~A-The method for identifying a compound that modulates T lymphocyte activation of claim 1, wherein the method comprising the steps of:~~
~~----- (i) contacting the compound with a TRAC1 polypeptide or a fragment thereof, the TRAC1 polypeptide or fragment thereof is encoded by a nucleic acid that hybridizes under stringent conditions to an antisense nucleic acid corresponding to a nucleic acid encoding a polypeptide having an amino acid sequence of SEQ ID NO:1;~~
~~----- (ii) determining the physical effect of the compound upon the TRAC1 polypeptide; and~~
~~----- (iii) determining the chemical or phenotypic effect of the compound upon a cell comprising the TRAC1 polypeptide or fragment thereof, thereby identifying a compound that modulates T lymphocyte activation.~~

24 - 46. (Canceled)

47. (Currently Amended) The method of claim 1, wherein the TRAC1 polypeptide comprises an amino acid sequence having ~~as~~ a sequence with at least about 95% sequence identity to an amino acid sequence of SEQ ID NO:1.

48 - 49. (Canceled)

50. (Currently Amended) The method of claim 22, wherein the functional effect is ~~indirectly~~ determined by measuring ~~in the T cell one or more of~~ CD69 expression, intracellular Ca^{2+} mobilization, Ca^{2+} influx, ligase activity, or lymphocyte proliferation.

51. (New) The method of claim 1, wherein the isolated recombinant polypeptide also comprises a label.

52. (New) The method of claim 51, wherein the label comprises an epitope tag or a fluorescent marker protein.

53. (New) The method of claim 1, wherein the isolated recombinant polypeptide is immobilized on a solid support.

54. (New) The method of claim 1, further comprising:

contacting the compound with a T lymphocyte; and
determining the effect of the compound on T lymphocyte activation."

55. (New) A method for identifying a compound that modulates T lymphocyte activation, the method comprising:

contacting the compound with an isolated recombinant polypeptide comprising a TRAC1 polypeptide having at least 90% sequence identity to the amino acid sequence of SEQ ID NO:1 and a label, wherein the TRAC1 polypeptide has ubiquitin ligase activity; and
determining the effect of the compound upon the TRAC1 ubiquitin ligase activity.

56. (New) The method of claim 55, further comprising:

expressing the recombinant polypeptide in a host cell; and
indirectly determining the effect of the compound upon the TRAC1 ubiquitin ligase activity by measuring in the host cell one or more of CD69 expression, intracellular Ca^{2+} mobilization, Ca^{2+} influx, ligase activity, or lymphocyte proliferation.

57. (New) The method of claim 55, further comprising:

contacting the compound with a T cell comprising the recombinant polypeptide; and
determining the effect of the compound upon TRAC1 polypeptide ubiquitin ligase activity.

58. (New) The method of claim 55, wherein the TRAC1 polypeptide has the amino acid sequence of SEQ ID NO:1.

59. (New) A method for identifying a compound that inhibits TRAC1 ubiquitin ligase activity, comprising:

contacting the compound with a polypeptide comprising a TRAC1 polypeptide having at least about 90% sequence identity to the amino acid sequence of SEQ ID NO:1, wherein the TRAC1 polypeptide has ubiquitin ligase activity; and

determining whether the TRAC1 ubiquitin ligase activity is inhibited.

60. (New) The method of claim 59, wherein determining whether the TRAC1 ubiquitin ligase activity is inhibited comprises determining whether there is a decrease in TRAC1 ubiquitin ligase activity in an *in vitro* ubiquitin ligase activity assay with the compound as compared to the TRAC1 ubiquitin ligase activity in an *in vitro* ubiquitin ligase activity assay without the compound.

61. (New) The method of claim 59, wherein the polypeptide is expressed in a cell and wherein determining whether the TRAC1 ubiquitin ligase activity is inhibited comprises directly or indirectly determining whether there is a decrease in TRAC1 ubiquitin ligase activity in the cell contacted with the compound as compared to the TRAC1 ubiquitin ligase activity in a control cell not contact with the compound.

62. (New) The method of claim 61, wherein indirectly determining whether there is a decrease in TRAC1 ubiquitin ligase activity in the cell comprises measuring at least one of the following:

CD69 expression;
intracellular Ca²⁺ mobilization;
Ca²⁺ influx; or
lymphocyte proliferation.

63. (New) The method of claim 59, wherein the polypeptide is labeled with one or more of a fluorophore, a chemiluminescent agent, a radioisotope, an epitope tag, an enzyme, a ligand, a bead, or a colloid.